

NEURAL NETWORK/EXPERT SYSTEM PROCESS CONTROL SYSTEM AND METHOD

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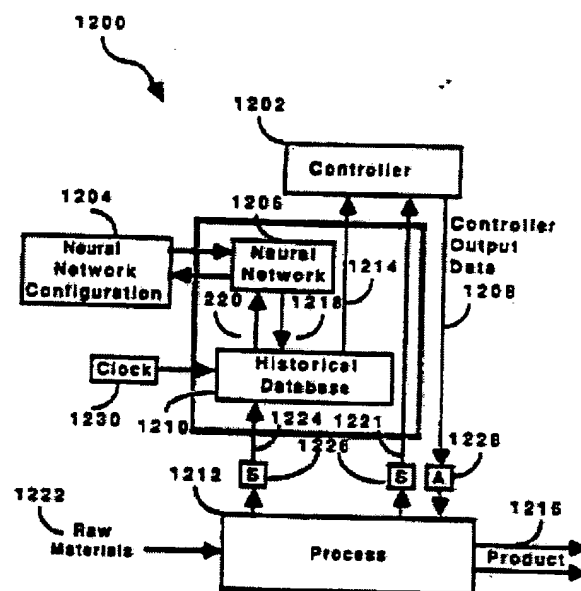
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Abstract of CA2066739

2066739 9202863 PCTABS00010 A neural network/expert system process control system and method combines the decision-making capabilities of expert systems with the predictive capabilities of neural networks for improved process control. Neural networks provide predictions of measurements which are difficult to make, or supervisory or regulatory control changes which are difficult to implement using classical control techniques. Expert systems make decisions automatically based on knowledge which is well-known and can be expressed in rules or other knowledge representation forms. Sensor and laboratory data is effectively used. In one approach, the output data from the neural network can be used by the controller in controlling the process, and the expert system can make a decision using sensor or lab data to control the controller(s). In another approach, the output data of the neural network can be used by the expert system in making its decision, and control of the process carried out using lab or sensor data. In another approach, the output data can be used both to control the process and to make decisions.



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